

## BIOGRAPHICAL SKETCH

**NAME:** Elaina M. Kenyon

**POSITION TITLE:** Toxicologist

### EDUCATION/TRAINING

Institution	Degree	Year	Field of Study
University of Rhode Island	B.S.	1981	Resource Development
Texas A&M University	M.S.	1983	Veterinary Epidemiology
University of Massachusetts	Ph.D.	1990	Toxicology/Public Health

### PROFESSIONAL EXPERIENCE:

9/92 - 1/95	Postdoctoral Fellow	CIIT, Research Triangle Park, NC
8/91 - 8/92	Associate	ENVIRON Corporation, Princeton, NJ
9/89 - 7/91	Postdoctoral Research Associate	University of Massachusetts Medical Center
4/76 - 8/81	Laboratory Technician	U.S. Environmental Protection Agency, Narragansett, RI

### PROFESSIONAL SOCIETIES:

Society of Toxicology, Full member (member Biological Modeling Specialty Section: treasurer BMSS, 2004-06)  
North Carolina Chapter, Society of Toxicology (Treasurer, 2004-06)  
Society for Risk Analysis, National  
RTP Chapter, Society for Risk Analysis (Treasurer, 1994-2000, Councilor 2000-2005)

### SELECTED AWARDS AND HONORS:

Certification: Diplomate, American Board of Toxicology, 1993 (recertified 1998, 2003)  
2004 Bronze Medal for Promoting Use of Sound Science in Agency Decisions  
2006 Exceptional/Outstanding ORD Technical Assistance to the Regions or Program Offices  
2007 Outstanding Presentation Award, Risk Assessment Specialty Section, Society of Toxicology

### INVITED LECTURES/SYMPOSIA:

1. "How Can Biologically-Based Modeling of Arsenic Kinetics and Dynamics Inform the Risk Assessment Process?, Society of Toxicology Annual Meeting, Charlotte, NC (2007).
2. "Incorporating Mechanistic Insights in a PBPK Model for Arsenic." Society for Environmental Geochemistry and Health 5<sup>th</sup> International Conference on Arsenic Exposure and Health Effects, San Diego, CA (7/14-18/02).
3. "The Impact of Selenium Status on the Metabolism and Disposition of Arsenic and Its Implications for Epidemiologic Investigations." Society for Environmental Geochemistry and Health 4<sup>th</sup> International Conference on Arsenic Exposure and Health Effects, San Diego, CA (6/18-22/00).

### ASSISTANCE/LEADERSHIP PROVIDED TO THE SCIENTIFIC COMMUNITY:

1. Member, Secretary's Scientific Advisory Board for Air Toxics, State of North Carolina (1996-present)
2. Member, Editorial Board for journal *Toxicology* (1996-present)
3. Member, Toxicology Advisory Board, Art and Creative Materials Institute (1997-present)
4. Peer Review Panel for Resorcinol B Toxicology Excellence for Risk Assessment (TERA), Cincinnati, OH, PartI: March 18-19, 2003, PartII: Nov. 17-18, 2004
5. Temporary Advisor, World Health Organization, International Programme on Chemical Safety, Task Group Meeting on Arsenic and Arsenic Compounds, Brisbane Australia, November 15-19, 1999.
6. Grant Review Committees: (1) NIH, NIEHS, Environmental Health Sciences Review Committee B temporary member, 1998, 1999 (training center grants); (2) NIH, NIEHS, Special Emphasis Panel, Superfund Basic Research Program, 1999; (3) American Chemistry Council, Long Range Research Initiatives RfP No. NT-01-04 APhysiological Parameters and Physiologically Based Pharmacokinetic Modeling for the Perinatal Period, November 2002.
7. Invited Participant: International Life Sciences Institute, Risk Sciences Institute, Workshop to Develop a Framework for Cumulative Risk Assessment, Sept 12-17, 1998.

#### **ASSISTANCE/LEADERSHIP PROVIDED TO THE AGENCY:**

1. Member, Institutional Animal Care and Use Committee, U.S. EPA, NHEERL (1998-2003)
2. Member, Drafting Group for Arsenic Research Plan (contributing scientist on final agency document). 1997-8.
3. Member, MMT Health Research Team. 1999-present.
4. NHEERL (ORD) Representative, Agencywide Arsenic Work Group. 1999-2002
5. Member, Air Toxics Research Implementation Planning Committee, 2000-2004.
6. Member, Interspecies Scaling Task Group (Risk Assessment Forum Task Group to write guidance document), 2002 - 2005.
7. Member, Metals Assessment Framework Task Group (white paper co-author, writing team for metals assessment framework document), 2002 – 2005.
8. Member, Data-Derived Uncertainty Factors Task Group (Risk Assessment Forum Task Group to write guidance document), 2005 - present.

#### **PUBLICATIONS (From January 1, 2001):**

1. Kenyon, E.M., Benignus, V., Eklund, C., Highfill, J.W., Oshiro, W.M., Samsam, T.E., and Bushnell, P.J. 2008. Modeling the toxicokinetics of inhaled toluene in rats: the impact of conditioning and physical activity. *J. Toxicology and Environmental Health, Part A*, 71:1-17.
2. El Masri, H.A., and Kenyon, E.M. 2008. Development of a human physiologically based pharmacokinetic model for inorganic arsenic and its mono- and di-methylated metabolites. *J Pharmacokinetics and Pharmacodynamics* 35:in press.
3. Benignus, V.A., Boyes, W.K., Kenyon, E.M., and Bushnell P.J. 2007. Quantitative comparisons of the acute neurotoxicity of toluene in rats and humans. *Toxicological Sciences* 100:146-55.
4. Hughes, M.F., Kenyon, E.M., and Kitchin, K.T. 2007. Research approaches to address uncertainties in the risk assessment of arsenic in drinking water. *Toxicology and Applied Pharmacology* 222:399-404.
5. Clewell, H.J., Thomas, R.S., Gentry, P.R., Crump, K.S., Kenyon, E.M., El-Masri, H.A., and Yager, J.W. 2007. Research Toward the Development of a Biologically Based Dose Response Assessment for Inorganic Arsenic Carcinogenicity. *Toxicology and Applied Pharmacology* 222:388-398.
6. Bushnell, P.J., Oshiro, W.M., Samsam, T.E., Benignus, V A, and Kenyon, E.M. 2007. Dosimetric Analysis of the Acute Behavioral Effects of Inhaled Toluene in Rats. *Toxicological Sciences* 99:181-189.
7. Boyes, W.K., Bercegeay, M., Krantz, T., Kenyon, E.M., Bale, A., Shafer, T., Bushnell, P.J., and Benignus, V. 2006. Acute toluene exposure alters rat visual function in proportion to momentary brain concentration. *Toxicological Sciences* 99:572-581.
8. Kenyon, E.M., Del Razo, L.M., and Hughes, M.F. 2005. Tissue distribution and urinary excretion of inorganic arsenic and its methylated metabolites in mice following acute oral administration of arsenate. *Toxicological Sciences* 85:468-475.
9. Hughes, M.F., Devesa-Perez, V., Adair, B., Styblo, S., Kenyon, E.M., and Thomas, D.J. 2005. Tissue dosimetry, metabolism and excretion of pentavalent and trivalent monomethylated arsenic in mice after oral administration. *Toxicology and Applied Pharmacology* 208:186-197.
10. Benignus, V.A., Coleman, T., Eklund, C.R., and Kenyon, E.M. 2006. A general physiological and toxicokinetic model for simulating complex toluene exposure scenarios in humans. *Toxicology Mechanisms and Methods* 16:1-10.
11. Kenyon, E.M., Del Razo, L.M., Hughes, M.F., and Kitchin, K.T. 2005. An integrated pharmacokinetic and pharmacodynamic study of arsenite action. 2. heme oxygenase induction in mice. *Toxicology* 206:389-401.
12. Himmelstein, M.W., Carpenter, S.C., Evans, M.V., Hinderliter, P.M., and Kenyon, E.M. 2003. Kinetic Modeling of  $\beta$ -chloroprene metabolism: II. The application of physiologically based modeling for cancer dose response analysis. *Toxicological Sciences* 79:28-37.
13. Hughes, M.F., Kenyon, E.M., Edwards, B.C., Mitchell, C.T., Del Razo, L.M., and Thomas, D.J.(2003) Accumulation and metabolism of arsenic in mice after repeated oral administration of arsenate. *Toxicology and Applied Pharmacology* 191:202-210.
14. Easterling, M.R., Styblo, M., Evans, M.V., and Kenyon, E.M. 2002. Pharmacokinetic modeling of arsenite uptake and metabolism in hepatocytes – mechanistic insights and implications for further experiments. *J. of Pharmacokinetics and Pharmacodynamics*, 29(3):207-34.
15. Kenyon, E.M., Fea, M., Styblo, M., and Evans, M.V. 2001. Application of modeling techniques to the planning of in vitro arsenic pharmacokinetic studies. *Alternatives to Laboratory Animals (ATLA)*, 29:15-33.